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ABSTRACT

This study tracks the increasing use of the term "information broker" in the professional library literature, and looks at the extent to which the professional literature reflects the increasing trend of information commodification. The content of three online databases was analyzed: LIBRARY LITERATURE, LISA, and ABI/INFORM. Four terms that express the gathering, retrieving, and organizing of information for a fee were used to search each database over the period 1985-1995: information brokers; information consultants; information entrepreneurs; and information specialists. The information terminology searched for within the three databases showed a dramatic increase between 1985 and 1990. The database with the greatest increase in occurrence of the four terms was ABI/INFORM, most likely because it is a business database, and businesses are one of the main consumers of information brokerage services. The growth spurt between 1985 and 1990 shows an exploding interest in the idea of buying the services of a professional in the information retrieval field. The trend changed between 1990 and 1995. The data shows a leveling off between 1990 and 1995 of the frequency of hits for all four terms, with only gradual increases or decreases in use. Changing popularity of terms over time may influence their use in the professional literature. Frequencies for the occurrence of each individual search term are discussed. (Contains 12 references.) (SWC)

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Content Analysis of the Increasing Trend of Information Brokers

A Master's Research Paper submitted to the Kent State University School of Library Science in partial fulfillment of the requirements for the degree Master of Library Science

by

Luellen Wilson

December 1996

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Abstract:

Information has become more prevalent and abundant in the last couple of decades. Libraries have begun to feel the pressure to give or make available more, always more, information. Due to budgetary concerns, libraries have had problems keeping up with the boom economy information has become. The significance of information in society is ever increasing; more than 50% of the employed population is involved in information manipulation.

The need for information has created a need for faster and guaranteed answers to information desires. Traditionally society has gone to certain institutions to have its information desires satisfied, such as government agencies—federal, state and municipal—and the library. The government has slowly started to sell off the information that has been painstakingly gathered, stored, and analyzed by it to private corporations. Information has become a commodity. This new phenomenon has caused a business to be formed. The commodification of information has caused the information entrepreneur to become popular with individuals and with small and large businesses. Who are these entrepreneurs? They are called by many names, some of which are information brokers, information entrepreneurs, information specialists and information consultants.

Information as a commodity has become an interesting topic in library and information science literature. The goal of the research was to do a content analysis of LIBRARY LITERATURE, LISA, and ABI/INFORM Business databases to find if the professional literature reflects the growing trend of information brokers. The reason for searching a business database is due to information brokerage becoming big business, and businesses need and use information on a daily basis. The study examined at a 10-year timeframe starting in 1985 and ending in 1995.

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I. INTRODUCTION

Information has become more prevalent and abundant in the last couple of decades. Libraries have begun to feel the pressure to give or make available more, always more, information. Due to budgetary concerns, libraries have had problems keeping up with the boom economy information has become. The significance of information in society is ever increasing; more than 50% of the employed population is involved in information manipulation. The information industries exemplify cost expenditures of one-third of a trillion dollars annually.[1]

The need for information has created a need for faster and guaranteed answers to information desires. Traditionally society has gone to certain institutions to have its information desires satisfied, such as government agencies—federal, state and municipal—and the library. The government has slowly started to sell off the information that has been painstakingly gathered, stored, and analyzed by it to private corporations. Information has become a commodity. This new phenomenon has caused a business to be formed. The commodification of information has caused the information entrepreneur to become popular with individuals and with small and large businesses. Who are these information entrepreneurs? These information entrepreneurs are called by many different names but the one that appears to be the most representative of the work done is information broker. The ALA Glossary defines an information broker as a person who, for a fee, provides information to individuals and businesses, using all available sources.[2]

John Buschman states his belief that the concept of information brokers puts the focus on the reference librarians and the services offered at a library. Traditionally

reference librarians were expected to personally show the patrons how to use the books and only eventually teach them to be more independent searchers. Service to people has been a basic idea in library service, but with the opening up of new avenues of getting similar information through information brokers traditional reference work is being changed. John Buschman believes the movement in reference service from this patron service has been subtle and presently needs to be revived and watched. He believes that the library is now merely a source of information and that library size has become the benchmark by which libraries, especially academic ones, are being judged. John Buschman later states that shifts away from the traditional reference orientation can be seen in the new demands and the new areas of reference service and that these shifts exist in both our perception of the librarian's job and in the librarian's public image. These shifts are best captured in the move toward a concept of information broker.[3] Michael Cart explains that an information broker is "a very real change in the role of the librarian [which] seems inevitable. As users can make direct use of information online, without the librarian intermediary, a new type of clientele will emerge."[4]

John Buschman explains in detail how he believes that information is the breaking down of text into smaller, accessible, useful parts regardless of their original context. Books and the collections of those books are the icons of where the wisdom and the history of civilizations are stored and information stands as a breakdown of those icons, the breaking down of one dimensional thoughts representative in books into fragments of information. It is those bits of information that have given the information brokers a basis for being. John Buschman believes that the "pure access to information stands in conflict with service to collections of books."[5] Those bits of information are separate and difficult

to get at for the poor and aged who do not have the money or patience to get to know a different form of access to information they could in the past get at by way of a book. Privatization of information resources can be viewed as another conflict with traditional reference orientation. Privatized sources of information can cause information to be blocked to all. The development of charges for interlibrary loans, and for online services has caused some governing boards and administrators to instruct directors to make money while providing these services. John Buschman believes the result of this is comparative disregard to service. Librarians' roles are changing to where they should be responsible for the information and stake their professional reputation on its accuracy. After all. this is what information brokers do—gather and give information and stake their professional reputation on the accuracy of that information. The concept of the information brokers is established on newer and privatized forms of information and so it stands within this situation that it is clashing with the traditional reference base.[6]

> Our traditional anxiety about image, combined with the high status of information technology, has led us into some uncritical approaches to new technologies. This in turn is widely acknowledged to be changing the definition of "librarian" in general, and moving the reference librarian toward the prestigious (and lucrative?) image of information broker. In so doing, we are leaving behind some of the values which have established and anchored reference service.[7]

Purpose of the study:

The purpose of the study is to track the increasing trend of the use of the term information broker in the professional library literature, focusing on the changing role of the traditional reference librarian. The major point of the research is to determine whether and to what extent the professional literature reflects the increasing trend of

information commodification which is becoming a big business.

Definition of terms:

Information broker—an individual or person who, on demand and for a fee, provides information directly to individuals and organizational consumers, using all possible sources.[8] Harrod's Librarians' Glossary defines it as an information worker who sells a personal service on a commercial basis. Operating as a freelance self-employed person who offers information gathering, research and information marketing services.[9]

Information consultant—similar to an information broker, but is used in a generic sense and is also one involved in information handling and data handling and related fields.[10]

Entrepreneur information brokers—Alice S. Warner defines them as "self-employed people or groups of people organized into businesses providing one or a combination of a wide and growing number of information-related services and products."[11]

Information entrepreneurship—Donna L. Gilton defines it as providing information for a fee.[12]

Limitations of the study:

This content analysis is limited to analysis of three publications so it is not by far giving a complete view of how much of an increase there is in the use of the term information

broker. It was done in five-year intervals starting in 1985 and finishing in 1995, so it is not a comprehensive examination of even those three publications. Therefore, the findings are not necessarily generalized to all periodical literature.

II. LITERATURE REVIEW

Alice Sizer Warner states that there are two kinds of library people who sometimes call themselves, or are described as, information brokers. The first are those within established libraries and institutions or, in private industries, who offer their services for a fee. These are staff members in public libraries where research service is performed for patrons at a cost. In fact many academic institutions have established library-services-for-a-fee departments, for the non-affiliated people who seek out their services. Most commonly offered services are online searches for research, and also research services other than and beyond online research. The second type of information brokers Alice S. Warner identifies are in private industries. These brokers offer services within the businesses they are working for and their positions are popularly called "intrapreneurships."[13]

Donna L. Gilton explains that information entrepreneurship can take two forms: independent information entrepreneurship, also called information brokering, or information intrapreneurship, which is the establishment of fee-based information services within an established library. Independent entrepreneurs use the library and consult with librarians to find information for themselves and for their clients. Entrepreneurs who provide information for a fee identify their customers needs and evaluate the information they provide to make sure it fulfills those needs. They find the information from print and online searches and also by finding experts in their customers' subject field.[14] Mick O'Leary says that the number of people with backgrounds as librarians or online searchers who are in the information business (outside the confines of an institution) has multiplied

ten or twenty-fold over the past fifteen years. The beginning of online databases has been the biggest single force in forming the information brokerage industry.[15] James G. Kollegger believes that with the growing online systems available people were feeling uncomfortable and people liked printed directories. Online growth spurted up in the 1970s and leveled off in the 1980s due to the market of entrepreneurs being saturated.[16]

Marilyn M. Levine discusses how the business of selling and buying information, information brokering, has been around a long time. This information brokering was first started in the middle of the 1400s in Gutenberg when the distribution of works of art stopped being distributed only by the church and the government, and became a mass production with the business of book publishing. In the 1700s fast and time sensitive techniques for information disbursement began. Information brokering, as we now know it as a business for the information retrieval professional, was begun by the French in 1935. The concept came from the Societe Francaise de Radiophonie which was an organization of professionals who started the idea of supplying information over the phone for a fee. The dial-in question and answering device started off very well but it quickly deteriorated. After World War II SVP (S'il Vous Plait) started again only with the strategy of playing on the belief that the upper class had special access to secret information. SVP invited people to join this private club, which let them in on all the information secrets they wanted, for the yearly price of admission which was a large subscription fee. In the United States, at the same time, several entrepreneurs found ways to enter the growing information business. Matthew Lesko started Washington Researchers, which told one how to get free information from the federal government, and Roger Sununit started his innovative work that would later create the online industry.

Marilyn M. Levine goes on to explain how the librarians were slow to realize, even with the growing entrepreneurial spirit, that they could leave the four walls of the buildings to perform fee-based services on a free-lance basis. The person and the building were seen to be joined together like Siamese twins.[17] James B. Dodd explains that brokers can be flexible, which is based on the availability of moving from one source to another. They can be speedy on a regular basis and , since the client is paying, the broker can use costly services to get the information that a library cannot afford to use, like long distance phone calls, air freight delivery service, or a trip to obtain the information. Information brokers are filling a need that libraries are either unwilling or unable to fill.[18]

Marilyn M. Levine explains how The American Society for Information Science (ASIS) was a major force in the push to separate information from the library. To ASIS members information was not only recorded items of knowledge, it was also the bits of information that could be transported through computers and telephone lines to where it was wanted by an individual. Following this approach people stayed where they were and information came to them. In the late 1960s, there were enough private information companies in the United States to encourage a group of database producers, managers and operators to create a trade organization, Information Industry Association (IIA), to serve their interests.[19] Brenda C. Rosen writes about the 1966 Freedom of Information Act which was passed and caused a stirring of new interest in public information.[20] Marilyn M. Levine explains how courses started to be offered on being an information specialist outside of a library building in 1976 by Susan Klement. In the early 1980s librarians and others had begun to see the advantages of the free-lance information brokering business.[21] Brenda C. Rosen believes that the new information professional is made of many different

professions, not just librarians. Some of these many professions are records managers, data processing managers and researchers. She describes how information brokering changed in the mid-seventies to charged specialized information services. These services include abstracting, analyzing the information, providing bibliographies, cataloging, consulting, directories, document delivery, indexing, providing information overviews, literature searching, market research, survey preparations, online searching, quick reference service, and general research.[22]

James B. Dodd wrote in the 1970s about the increasing number of independent information brokers who operated mainly as a middle man between one or more libraries and paying information users. Their main goal was to make a profit. Many of the clients of the information brokers today are special libraries, but firms and individuals use them, too. Mr. Dodd estimates that the total private sector of information brokers is now a $5-$10 million dollar industry and that it will grow to ten times that size in ten years. The broker uses bibliographic expertise and tools to search for and retrieve an original item or a copy of it, and then delivers it to the customer. Some brokers limit themselves to using one large library and others use any resource available to them. These brokers deal in small quantities of documents, offer rapid custom service and charge a fee for their services. Other brokers are individuals, partnerships or organized small companies which do any project or assignment in the general field of information services. Some of these services include document delivery, preparation of bibliographies, literature searches, manual and computerized, and state of the art reviews. They also offer some specialized services such as handbook preparation, translations, library organization, collection development, information systems development, technical writing and editing, assistance

in the selection and hiring of library and information personnel, speech writing and indexing. James B. Dodd believes that the growth of successful information brokers is a healthy occurrence. Brokers can be flexible, which is based on the availability of moving from one source to another. It is very important that a broker be able to respond quickly and effectively. The results of poor service will more quickly affect the broker than having a lack of clients will. Information brokers are helping to get rid of the incorrect assumption that library service is free. The cost of information is not expensive. What is expensive, in Mr. Dodd's opinion, is the lack of information or at least the lack of the correct information.[23]

Susan R. LaForte discusses how many information brokers have library backgrounds, and how these brokers are criticized for charging for free information. These brokers contend that their charges are for the services involved in providing the information, not the information itself. There is a misconception that information is free- it is not. Information is expensive to create, store, maintain, access, and update. Since the 1960s there has been a large number of brokers entering the field. The Directory of Fee-Based Information Services lists 257 information brokers, librarians and other professionals who provide information services from 15 to 75 dollars an hour. They can be found in 38 states and in Washington D.C., Canada, Australia, Denmark, England, Iceland, Scotland, and Spain.

These brokers see their work as providing an additional service to public libraries. They are doing what public librarians do not have time to do. They can move anywhere to get the information with the help of the telephone and the computer terminal.[24] Susan R. LaForte also writes that "these 'alternative librarians' are not only identifying and

serving a market which has traditionally not used the library, but is helping to change the image of the librarian."[25]

III. METHODOLOGY

The research method was a content analysis of three databases: LIBRARY LITERATURE, LISA AND ABI/INFORM Business. Information as a commodity has become an interesting topic in library and information science literature. The goal of the research was to do a content analysis of LIBRARY LITERATURE, LISA, AND ABI/INFORM Business databases to determine whether the professional literature reflects the growing trend of information brokers. The study examined a 11-year time frame starting in 1985 and ending in 1995. Due to the years covered on the LISA CD-Rom and the time frame examined for this research, the print resources were analyzed for 1995 in LISA. This was not necessary for the ABI/INFORM database since its coverage started in 1971 or for LIBRARY LITERATURE, which started in 1984. The content analysis was on a word search of the journal's feature article in print and in electronic form.

The study examined more than just the term information brokers since there was more than one term used to mean the gathering, retrieving, and organizing of information for a fee. Similar terms that were examined were information consultants, information specialists, and information entrepreneurs. Originally, seven terms were going to be searched but two terms had no hits in ABI/INFORM and very few in LISA and LIBRARY LITERATURE. The original seven terms were information brokers, information consultants, information entrepreneurs, information specialists, freelance librarians, information-on-demand, and full-service information. The last three terms or concepts either received no hits from one or two databases or received so few hits overall that they were not used in this research.

The frequency for each term was the number of hits each term received in the word search. All four terms had six frequencies: one from each database and one for each year in 1985, 1990, and 1995. Once that was determined, the frequencies for all four terms were added together to get the frequency for each database for each of the three years examined. Once the frequency for each database was calculated, it was added all together to get the total frequency. Once the total frequency was calculated, the number was divided into each database frequency. These calculations were down for each year. The percentage arrived at gave the frequency percentage for each year and database. Once all the frequencies and all the percentages were calculated, two years were compared to show a growth rate in database frequencies. The percentage increase or decrease was calculated by subtracting the individual frequencies between 1985 and 1990, and 1990 and 1995 for the individual databases. The difference between the numbers was then divided into the frequency from the first year. The growth percentage was the answer to this. If the first year's frequencies were smaller than the second year's frequencies, the growth percentage was positive; if the first year's frequencies were larger than the second year's, then the growth percentage was negative. All of this can be seen in Table 1.

Table 2 shows the four terms frequencies. These frequencies were arrived at by adding the frequencies for each term within each database for all three years: 1985, 1990 and 1995. The total frequency, the individual frequency percentages, and the growth percentages were all calculated the same way in Table 2 as in Table 1. Graph 1 and Graph 2 are graphic representations of Table 1 and Table 2. The graphs show the frequencies for each database in Graph 1 and for each term in Graph 2.

Originally, the data was going to be collected over a 20-year period from 1975 to 1995. LIBRARY LITERATURE and LISA databases did not, unfortunately, cover that timeframe so it would have been necessary to search the print journals for the four terms. The print versions of these two databases were organized by subject and did not allow for a word search, which was done in the online database versions. This difficulty and the lack of the terms even being included in the index made it difficult to get an accurate count of articles written on information specialists, information consultants, and information entrepreneurs. Information brokers was included but it had "see also" references to the terms commercial services and document delivery services, which were not two terms being looked at for this study.

After elimination of the 20-year timeframe to examine, it was decided that six years spanning an 11-year timeframe would give an accurate depiction of the trends in the database for each of the four terms. The years picked were 1985-1984, 1990-1989, and 1995-1994. It was soon discovered that this also resulted in a large number of hits, especially in ABI/INFORM. These years, although, allowed the search on LIBRARY LITERATURE to be exclusively on the online database system. LISA still had to be used in the print format for 1995.

Due to the difficulty of using the print version of LIBRARY LITERATURE and LISA and also due to the large number of hits on the online version, it was decided that using an 11-year timeframe concentrating on three years would be able to show enough of a trend in the number of hits. These three years are 1985, 1990, and 1995.

The databases that were used to collect the data were all online systems free to the public, no fee online services. ABI/INFORM and LIBRARY LITERATURE were both

searched through the Ohiolink Research Databases made available through Ohiolink, which was available through Kentlink. The LISA database was found on the Silverplatter CD-Rom databases made available at the School of Library and Information Science at Kent State University. This database had not been updated since 1992. The Ohiolink databases were updated on a normal basis. In all other databases, the terms were joined together with the booleon operator and they were not truncated; they were typed in exactly as they are spelled. Some of the records were repeated within the same database. These repeat records were not counted in the frequency count. ABI/INFORM was the database that had these repeat records, but it only happened two or three times.

LIBRARY LITERATURE and LISA had overlap records, which means that some of the records between the two databases were the same article. These overlap records were kept in and are part of the frequency count but, again, these are a small number of hits compared to the grand total of hits. The grand total of hits for each of the four terms and three databases are exactly as you would find them if the search was repeated presently. The repeat and overlap records were not subtracted from the total.

The four terms were not searched by subject, due to the lack of any hits in ABI/INFORM database for any of the terms. A word search supplied many more hits overall for the terms.

Finally, for each record, the date of the hit was from the publication date of the journal.

IV. ANALYSIS OF DATA

The information terminology searched for within the three databases showed a dramatic increase between 1985 and 1990 as shown in Table 1. In ABI/INFORM the increase was 1251%, while in LIBRARY LITERATURE the rise in frequency of hits was 81%. LISA showed a less dramatic increase with 16.3% between 1985 and 1990. ABI/INFORM saw a greater increase due to the terms chosen (information brokers, information entrepreneurs, information specialists, and information consultants) to search under. These terms were used in many different disciplines covered in ABI/INFORM, business, real estate, marketing, and computer science to name a few. The database searches the characters inputted, not the concepts of the terms inputted, so the hits were multidisciplinary. Some of the citations found had no bearing on the concept of how this research was interpreting those four terms. In the context of this paper's research, LIBRARY LITERATURE and LISA's results gave a better picture of the terminology growth in the concept of interest behind the four terms. ABI/INFORM had a much larger coverage with various disciplines that use the same terms but in a different context. This tremendous increase in frequency for the four terms showed an interest in information brokering and in the new technology that was beginning to be available in the 1980's. This growing interest between 1985 and 1990 was not only about the fulfillment of an information need but also a rising interest in how to access it.

The technology of CD-ROM's, the Worldwide Web, Online catalogs, and Online databases was increasing in popularity among vendors and producers of

information in the mid 1980's. When people have the information and technology to store great amounts of information it is natural to combine the two facets into one. Producers and vendors saw a market for these technologies in libraries and information centers around the world. As these new technologies were sold to libraries, other institutions acknowledged a need for the information, just as businesses and individuals have always done, but know they expected faster results and accurate, guaranteed information given by professionals who would fulfill their information needs quickly. Librarians have a tradition for getting the information to a patron but they do not always have a lot of time. Businesses in the past have not gone to a library traditionally for quick, accurate, guaranteed information. Businesses in the past have had their own in-house librarian or information specialists who have used the resources provided by the company to answer the employee's information need. As downsizing has occurred, more businesses have closed that service and have started to contract out to information professionals to have their information needs fulfilled. That is where the information brokers, entrepreneurs, specialists, and consultants have gotten the majority of their business. As the technology became available and the recognized need for guaranteed and quick information became evident, a business was formed. A business of selling the time a broker, specialist or consultant spent on a client search and backing up the results with the professional name of these entrepreneurs. This dramatic increase in frequency of hits between 1985 and 1990 shows this phenomenon.

The rise in information terminology leveled off between 1990 and 1995 as shown in Table 1. The ABI/INFORM database had a 30% increase between 1990 and 1995, as compared to the 1251% increase between 1985 and 1990. LIBRARY LITERATURE saw a 17.2% decrease in frequency of terms as compared to 81% increase between 1985 and 1990. LISA, meanwhile, saw a 82% decrease between 1990 and 1995. This decrease in the rate of growth may be due to the lack of new technology or innovations. The growth of the technologies stabilized so the literature discussing it and the people who were experts in using them leveled off. CD-ROM's were still being used, the Worldwide Web became a household name and online catalogs in libraries have become familiar to the frequent library user. That is not to say that those technologies were losing popularity, they were not; if anything they were gaining in use especially with students of all ages. These technologies are advancing in speed and memory capacity and programmers are always going to experiment with better access points. The machines look the same; the difference is the speed in which they can process your search. Also, as individuals and businesses became used to those products, less was written on the specialists retrieving information. The terminology decreasing in its growth rate can be seen in Graph 1. Graph 1 shows that the total frequencies in all three databases jumped the most between 1985 and 1990. The growth percentages shown in Table 1 explain how high an increase was seen. ABI/INFORM does increase in total frequency in 1995 as compared to 1990, but not as dramatic an increase was seen; the increase was only 30% not 1251% like in 1990.. LIBRARY LITERATURE saw a decrease in its total frequency in 1995 which

caused its growth percentage to decrease to 17.2%. LISA's 1995 total frequency was skewed since that data was arrived at from the print subject index of LISA not the keyword search done online. The reasons for this were discussed in the Methodology, Chapter 3. LISA's growth percentage between 1990 and 1995 decreased down to 82% from the +16.3% seen between 1985 and 1990.

The four terms, as shown in Table 2, showed a less dramatic increase than was seen in Table 1 but there was indeed an increase. Information specialists saw an increase in frequency of hits of 180% among the three databases searched for this term between 1985 and 1990. The total frequency for information specialists increased in 1990 but the frequency percentage in 1990 was less than 1985's frequency percentage. That was due to the fact that in 1985 information specialists had a larger frequency as compared to the total frequency in 1985. Information specialists decreased in both frequency of hits and in frequency percentage in 1995 as compared to 1990. It decreased in growth by 22.4% between 1990 and 1995. The term was dramatically falling in literature use. This decrease could be caused by the developing profession changing their professional title to some other term. Information brokers saw a 319% rise in growth between 1985 and 1990. As seen in information specialists, information brokers saw an higher frequency of hits, 63, and percentage, 47%, in 1985 than in 1990 with 40.9% but an higher frequency of 264. Again this was due to the total number of hits in 1990 and the higher proportion of them being from information brokers in 1985. Information brokers also saw a decrease in frequency percentage to 39.7% in 1995 even with an higher frequency of 291. Different than information specialists,

information brokers saw an increase in its growth rate between 1990 and 1995 of 10.2%. Information specialists and brokers both get higher frequencies every five years but with lower frequency percentage and growth rate. This was due to the proportion of the frequencies as compared to the total frequencies for all four terms decreasing, which can be interpreted that the terms information entrepreneurs and consultants were growing in popularity in the literature. Information consultants saw a growth of 720% between 1985 and 1990, while information entrepreneurs saw a 1640% growth between 1985 and 1990. Information consultants and information entrepreneurs saw the opposite trend of increase in frequency percentage than information specialists and brokers. Information consultants increased in frequency and in percentage of frequency for 1985, 1990, and 1995. In 1985 it was 14.9% of the total frequency; in 1990, 25.6% of the total; and in 1995, it was 32.5%. The growth increase between 1990 and 1995 was 45.1% which follows the trend of decreasing from 1990's growth percentage of 720%. Information entrepreneurs also saw a similar increase. In 1985 it was 3.7% of the total frequencies, in 1990 it was 13.5% and in 1995 it was 14.2%. The growth increase between 1990 and 1995 was 19.5%. The increase between 1990 and 1995 was dramatically less than the increase between 1985 and 1990 at 1640%. These growth spurts show an exploding interest in the idea of buying the services of a professional in the information retrieval field from 1985 and 1990. The trend changed between 1990 and 1995 for all four terms. The data showed a leveling off between 1990 and 1995 of the frequency of hits for all four terms, with only gradual increases or decrease in use. Graph 2 visually represents

the frequencies and shows that there was no large increase between 1990 and 1995. The large growth increase can be seen between 1985 and 1990. There was no large increase for any term in 1995. Information brokers kept increasing between 1990 and 1995 but only +10.2%, while between 1985 and 1990 it increased by 319%. Information entrepreneurs increased 19.5% between 1990 and 1995 but increased 1640% between 1985 and 1990. Information specialists decreased 22.4% between 1990 and 1995, which was dramatically down from the 180% increase between 1985 and 1990. Information consultants increased by 45.1% between 1990 and 1995 but that was down dramatically from the 720% increase seen between 1985 and 1990. The explanation for these dramatic fluctuations could be the terms themselves. As with any new business or profession, the people in the profession change their titles and redefine what services they provide for their clients. It appears by the data that information consultants and information entrepreneurs are the titles they prefer and information brokers and information specialists are not as popular in the literature being published recently.

Overall, the tables show a stabilization in the use of information terminology but the individual terms used by the literature on the profession has been fluctuation in popularity. As this recent profession grows and redefines its duties, the terms associated with the information business will change and grow.

TABLE 1

Distribution of Total Information Terminology

Hits by Year and Database

Database	Year							
	1985		1990			1995		
	f	%	f	%	+/-	f	%	+/-
ABI/INFORM	37	27.6	500	77.6	+1251%	651	88.8	+30%
LIBRARY	48	35.8	87	13.5	+81%	72	9.8	-17.2%
LITERATURE								
LISA	49	36.6	57	8.9	+16.3%	*10	1.4	-82%
Total	134	100	644	100	+381%	733	100	+13.8%

*Results could be skewed because only manual indexes available from 1992-1995 where keyword search was not possible.

Graph 1

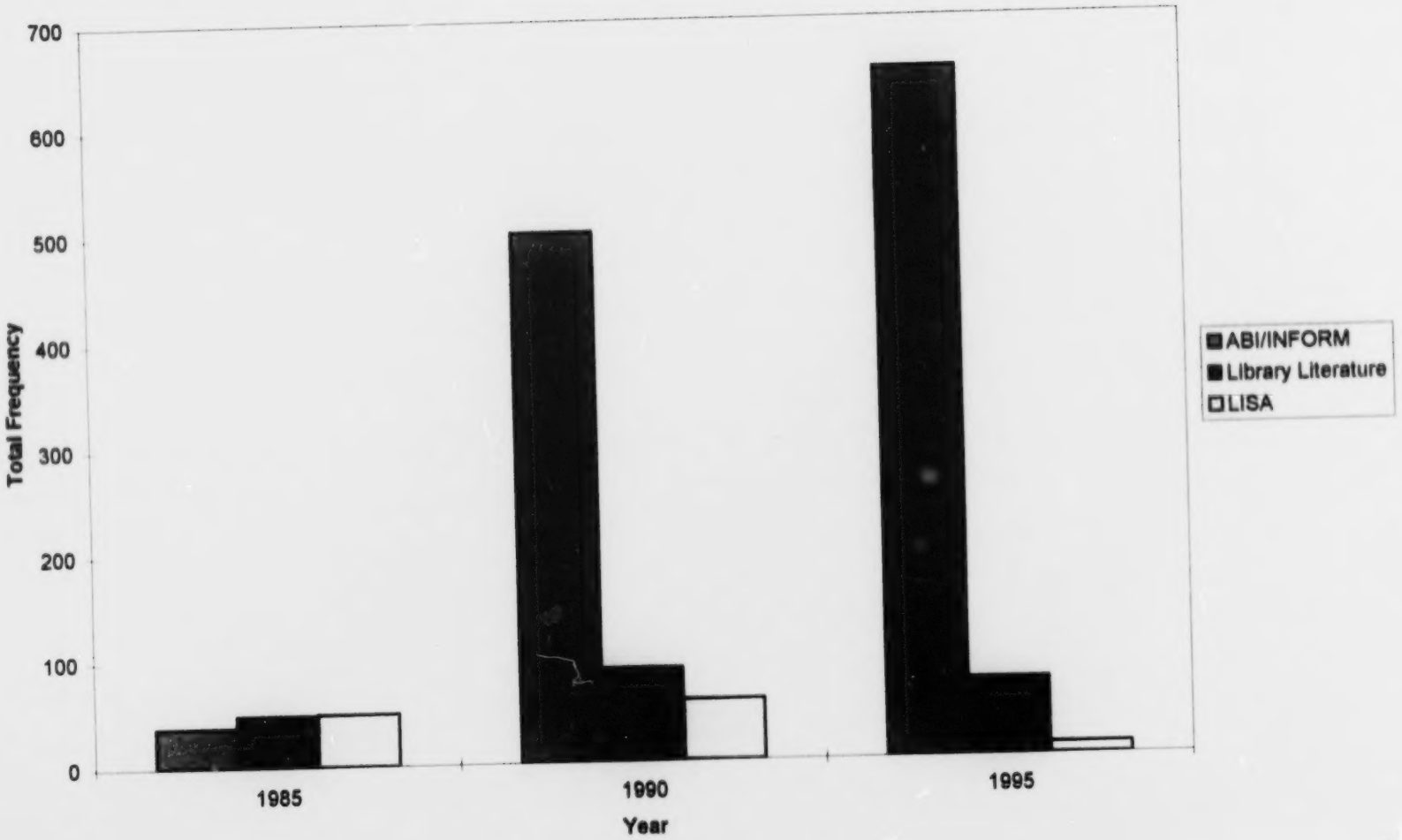

700
600
500
400
300
200
100
0
Total Frequency
1985
1990
1995
Year
ABI/INFORM
Library Literature
LISA

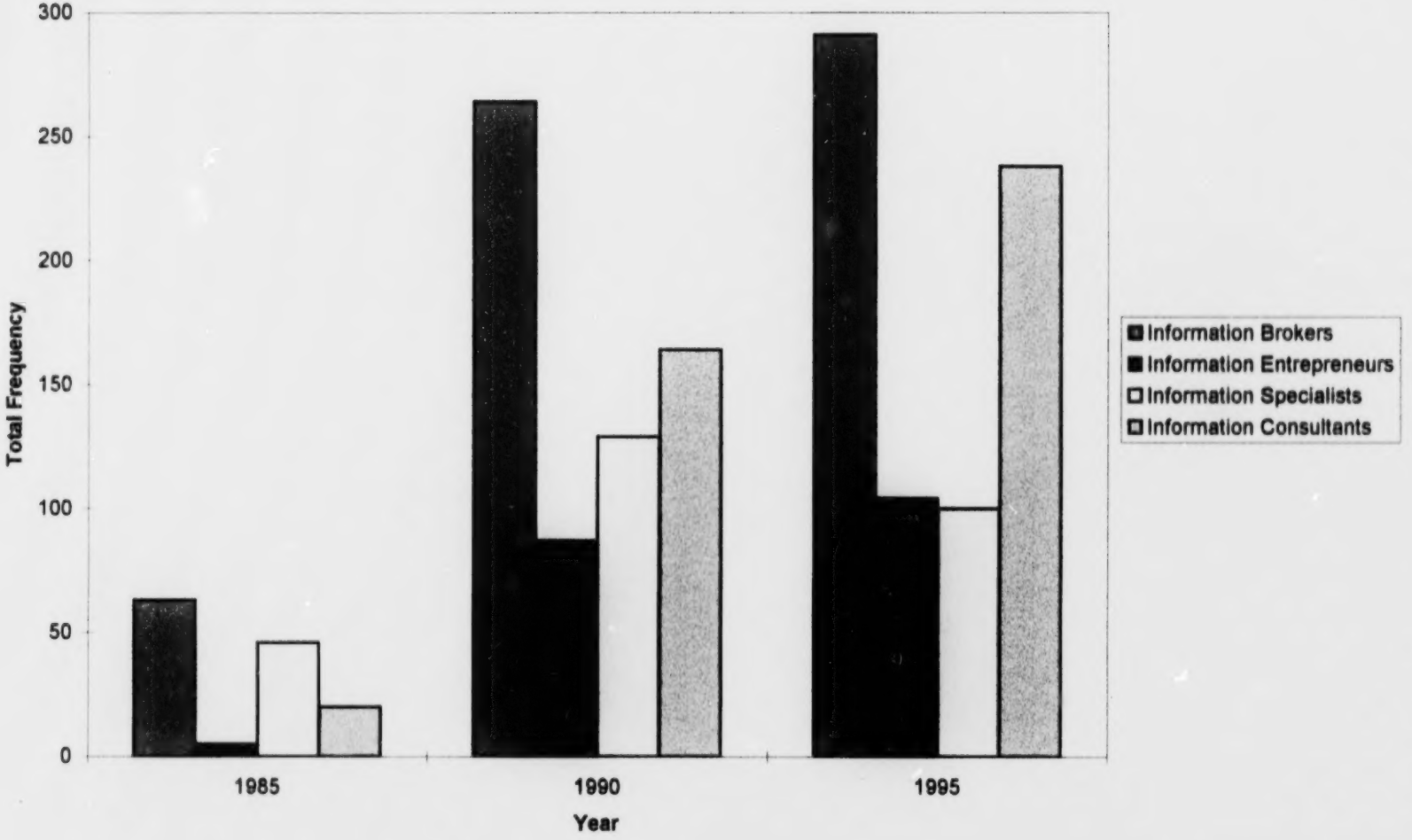
TABLE 2

Distribution of Databases

Hits by Year and Information Terminology

Terms	Year							
	1985		1990			1995		
	f	%	f	%	+/-	f	%	+/-
Information brokers	63	47%	264	40.9%	+319%	291	39.7%	+10.2%
Information entrepreneurs	5	3.7%	87	13.5%	+1640%	104	14.2%	+19.5%
Information specialists	46	34.4%	129	20.0%	+180%	100	13.6%	-22.4%
Information consultants	20	14.9%	164	25.6%	+720%	238	32.5%	+45.1%
Total	134	100	644	100	+381%	733	100	+13.8%

Graph 2


300
250
200
150
100
50
0
Total Frequency
1985
1990
1995
Year
Information Brokers
Information Entrepreneurs
Information Specialists
Information Consultants

V.CONCLUSION

In summary, all three databases' growth rates increased between 1985 and 1990 and decreased between 1990 and 1995. ABI/INFORM although was the only database that saw an increase in its growth rate between 1990 and 1995. LIBRARY LITERATURE and LISA saw a decrease in growth between 1990 and 1995. ABI/INFORM's larger frequency percentage could probably be explained by the many different ways that the business community uses terms such as consultants, brokers, entrepreneurs, and specialists, and when those terms were searched for using a word search with the term information, a multitude of hits occured. In LISA and LIBRARY LITERATURE, the terms were used sparingly and only with several different possibilities as to what the author meant by brokers, consultants, specialists, and entrepreneurs. The computer does not know what the user means or under which definition the user wants the term to be found.

The information terms saw a different trend with three terms out of four increasing in frequency percentages. Information specialists was the only term that decreased in frequency and saw a decrease in growth rate percentage between 1990 and 1995. While the other three terms saw an increase in growth between 1990 and 1995, the growth rate percentage decreased significantly as compared to the 1985-1990 period.

The trend that was theorized was that the search terms would increase its number of frequencies over the ten-year time frame for all three databases. That

was not found to be true while examining the raw data collected. Of course, due to the limitations of using the print version of LISA, that count was not accurate but LIBRARY LITERATURE was used completely with the online system and all the search terms did not increase over time as expected. Even accounting for the overlap and repeat hits within and between the databases, it does not allow for the fact that ABI/INFORM was the only database that the search terms increased in frequency.

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4. Buschman, 134.

5. Buschman, 135.

6. Buschman, "A Critique of the Information Broker: Contexts of Reference Services," 135-137.

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8. The ALA Glossary of Library & Information Science: 117.

9. Harrod's Librarians' Glossary, compiled by Ray Prytherch, 8th ed., (Aldershot, England: Gower Publishing Co., 1995): 319.

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12. Donna L. Gilton, "Information Entrepreneurship: Sources for Reference Librarians," RO 31 (Spring 1992): 346.

13. Warner, "To Be or Not To Be an Information Broker," 185-187.

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15. Mick O'Leary, "The Information Broker: A Modern Profile," Online Journal (November 1987): 24-25.

16. James G. Kollegger, "An Online Database Producer's Memoirs," Database 19 (October 1988): 33-36.

17. Marilyn M. Levine, "A Brief History of Information Brokering," Bulletin of the American Society for Information Science 21 (February/March 1995): 8-9.

18. James B. Dodd, "Information Brokers," Special Libraries 67 (May/June 1976): 247.

19. Levine, "A Brief History of Information Brokering," 9.

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24. Susan R. LaForte, "Information Brokers: Friend and/or Foe?" Public Library Quarterly 3-4 (Winter 1982): 83-88.

25. LaForte, 90.

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